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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,833	04/12/2001	Max Amon	017750-711	1959

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EXAMINER

AMARI, ALESSANDRO V

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/832,833

Applicant(s)

AMON ET AL.

Examiner

Alessandro V. Amari

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,13-15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,13-15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country; more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7 and 13-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Chipper, U.S. Patent 6,018,414.

In regard to claim 1, Chipper discloses (see Figures 2A and 2B) an infrared (IR) lens comprising: a first surface (left side of 32); and a second surface (right side of 32), wherein the IR lens is a moldable IR transmissive material as described in column 5, lines 63-67 and column 7, lines 28-29 and one of a first surface and a second surface includes a kinoform superimposed on an aspheric surface as described in column 6, lines 52-55, column 7, lines 60-63 and column 9, lines 40-47.

Regarding claim 3, wherein one surface relief with the kinoform superimposed on the aspheric surface is formed directly in a molding operation as described in column 7, lines 28-35 and column 9, lines 40-47, however, it should be noted that if a product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. [In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966].

Regarding claim 4, Chipper discloses that the moldable IR transmissive material is a chalcogenide glass as described in column 6, lines 12-16.

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Regarding claim 6, wherein the lens is manufactured as a unitary structure in a molding operation as described in column 7, lines 28-35 and column 9, lines 40-47, however, it should be noted that if a product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. [*In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966].

In regard to claim 7, Chipper discloses (see Figures 2A and 2B) an infrared (IR) lens comprising: a first surface (left side of 32); and a second surface (right side of 32), wherein the IR lens is made from a moldable IR transmissive material as described in column 5, lines 63-67 and column 7, lines 28-35 and wherein one of the first surface and the second surface includes a kinoform superimposed on an aspheric surface as described in column 6, lines 52-55, the one first surface or second surface molded from the moldable IR transmissive material as described in column 7, lines 60-63 and column 9, lines 40-47.

In regard to claim 13, Chipper discloses (see Figures 2A and 2B) an infrared IR lens comprising: a first aspherical surface (32); and a second surface (42), , wherein the first aspherical surface as described in column 6, lines 52-55 is superimposed with a kinoform, as described in column 7, lines 60-63 and, wherein the lens is made from a moldable IR transmissive material as described in column 5, lines 63-67, column 7, lines 28-35 and column 9, lines 40-47.

Regarding claim 14, Chipper discloses that the moldable IR transmissive material is a chalcogenide glass as described in column 6, lines 12-16.

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In regard to claim 15, Chipper discloses (see Figures 2A and 2B) an infrared imaging optical arrangement comprising: a first lens (32); and a second lens (38), wherein at least the first lens is made from a moldable infrared (IR) transmissive material as described in column 5, lines 63-67 and column 7, lines 28-35 and wherein at least the first lens has a kinoform superimposed on an aspheric surface on one of a first surface or a second surface as described in column 6, lines 52-55, column 7, lines 60-63 and column 9, lines 40-47.

Regarding claim 17, Chipper discloses that the moldable IR transmissive material is a chalcogenide glass as described in column 6, lines 12-16.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chipper U.S. Patent 6,018,414 in view of Lettington et al. U.S. Patent 4,154,503.

Regarding claims 5, 18 and 19, Chipper teaches the invention as set forth above but does not teach that the moldable IR transmissive material is an arsenic selenide glass.

Regarding claims 5, 18 and 19, Lettington et al. does teach that the moldable IR transmissive material is an arsenic selenide glass as described in column 4, lines 4-30.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize arsenic selenide glass as taught by Lettington et al. in the lens of Chipper in order to form lenses that transmit in the IR range.

Response to Arguments

5. Applicant's arguments filed 29 January 2003 have been fully considered but are unpersuasive.

The Applicant argues that the prior art, Chipper makes a distinction between a first group of lens elements that can be formed so as to include an aspheric surface and a second group of diffractive lenses that can include a kinoform. While Applicant acknowledges that Chipper teaches that the diffractive surface can be formed on a second side of a lens element, he asserts that Chipper does not disclose an infrared lens wherein one of the surfaces includes a kinoform superimposed on an aspheric surface but rather providing an aspheric surface on a first side of a lens element and a kinoform on a second side of a lens element.

In response to this argument, the Examiner would first like to point out that Chipper teaches that any of the lenses (32, 34, 36, 38 and 40 in Figure 2) may include aspheric surfaces as described in column 6, lines 52-55. In the optical art, it is well known to include aspheric surfaces on any lens surface for optical performance gains. Furthermore, the Applicant acknowledges that Chipper teaches that the diffractive surface can be formed on a side of a lens element and thus necessarily, the kinoform which is simply the diffractive surface (or groove form) is superimposed or applied to the aspheric surface which may be the first or second side of the lens.

The Applicant further argues that the optical equation in column 8 of Chipper is different from Applicants' equation 1 which mathematically defines an aspherical surface with a kinoform.

In response to this argument, the Examiner would like to remind the Applicant that the rejection is based upon the claim recitation. None of the claims recite optical equations further defining aspherical or diffractive surfaces of the claimed infrared lens.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (703) 306-0533. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

ava *ava*
March 27, 2003

Mark A. Robinson
MARK A. ROBINSON
PRIMARY EXAMINER